

FIG. 1

PRIOR ART

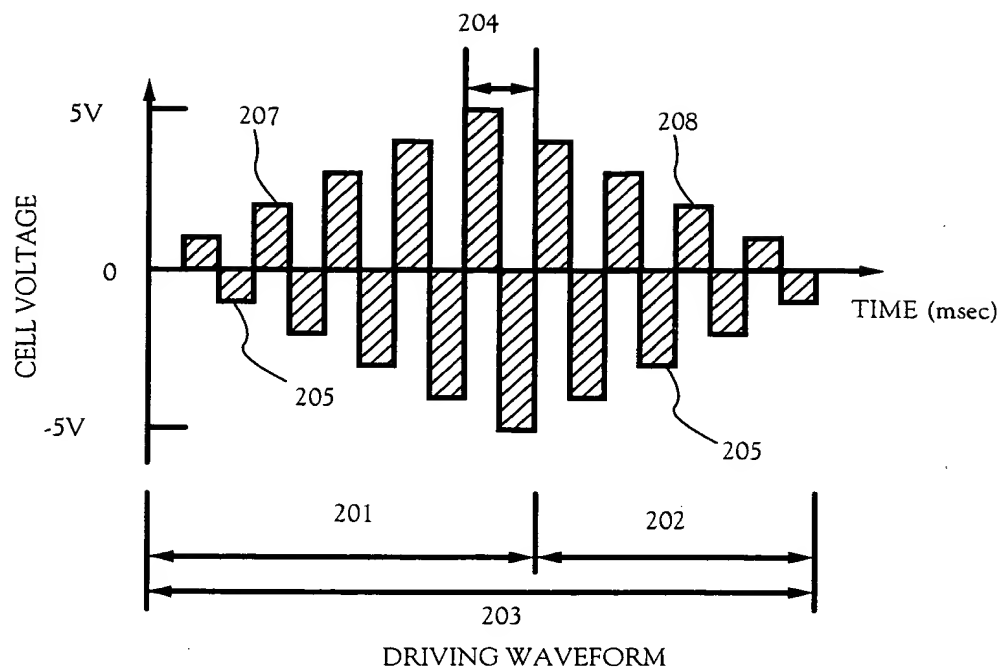


FIG. 2A

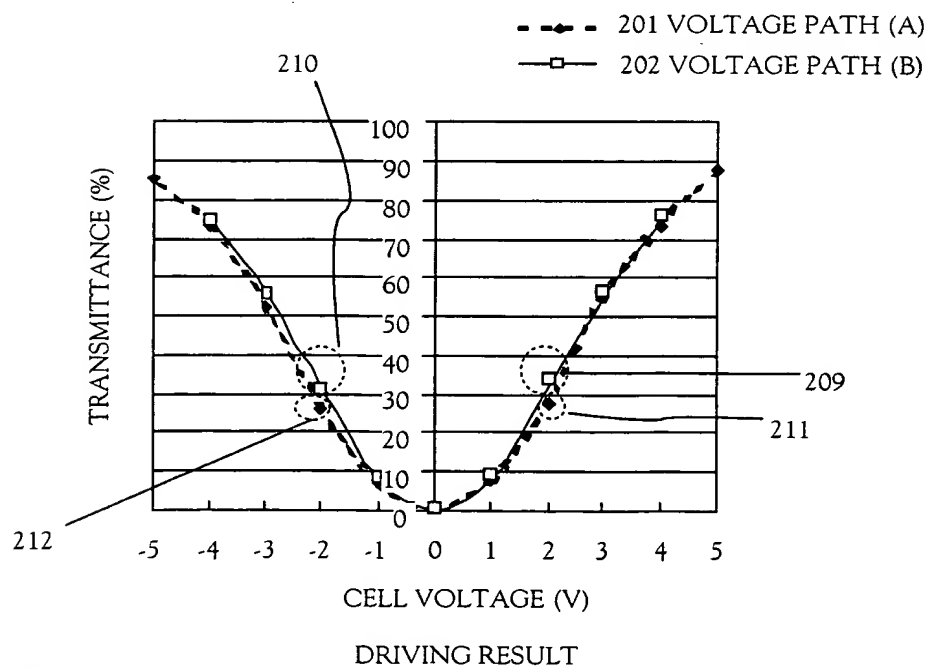


FIG. 2B

DRIVING WAVEFORM AND DRIVING RESULT  
WHEN "0V" RESET PERIOD IS NOT PROVIDED

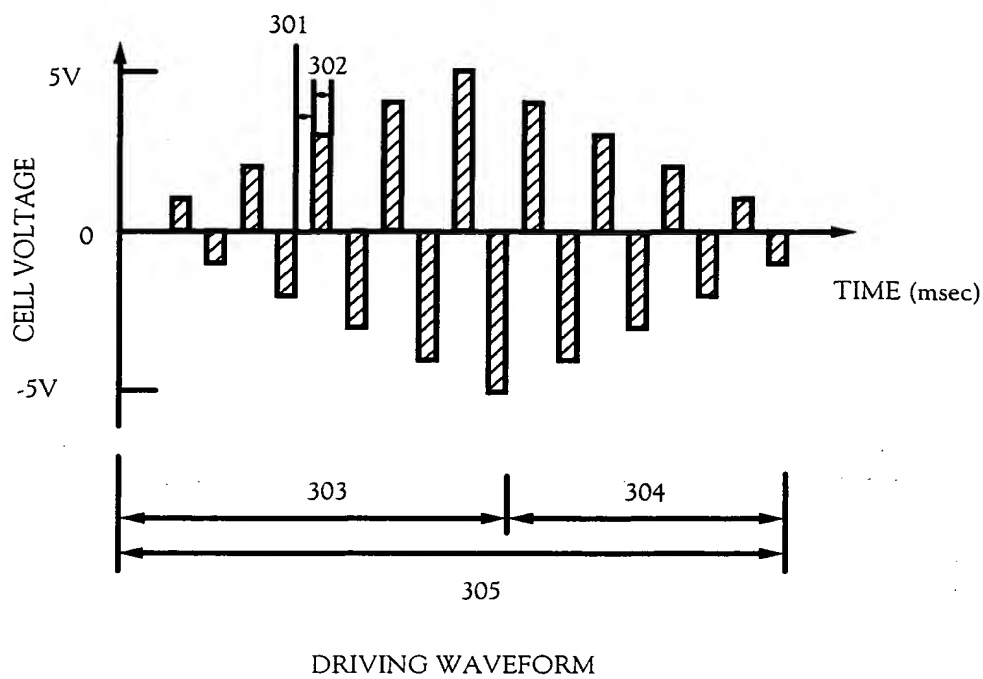


FIG. 3A

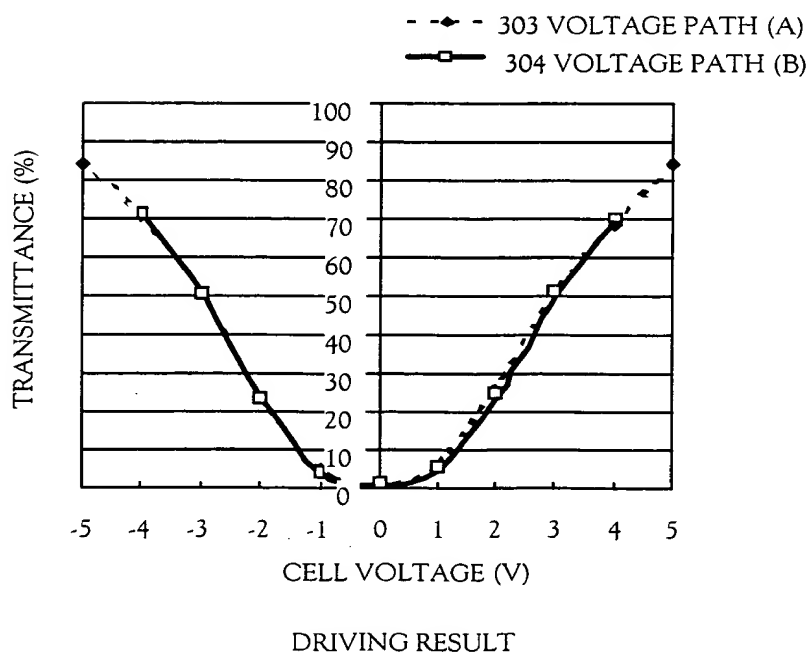


FIG. 3B

DRIVING WAVEFORM AND DRIVING RESULT  
WHEN "0V" RESET PERIOD IS PROVIDED

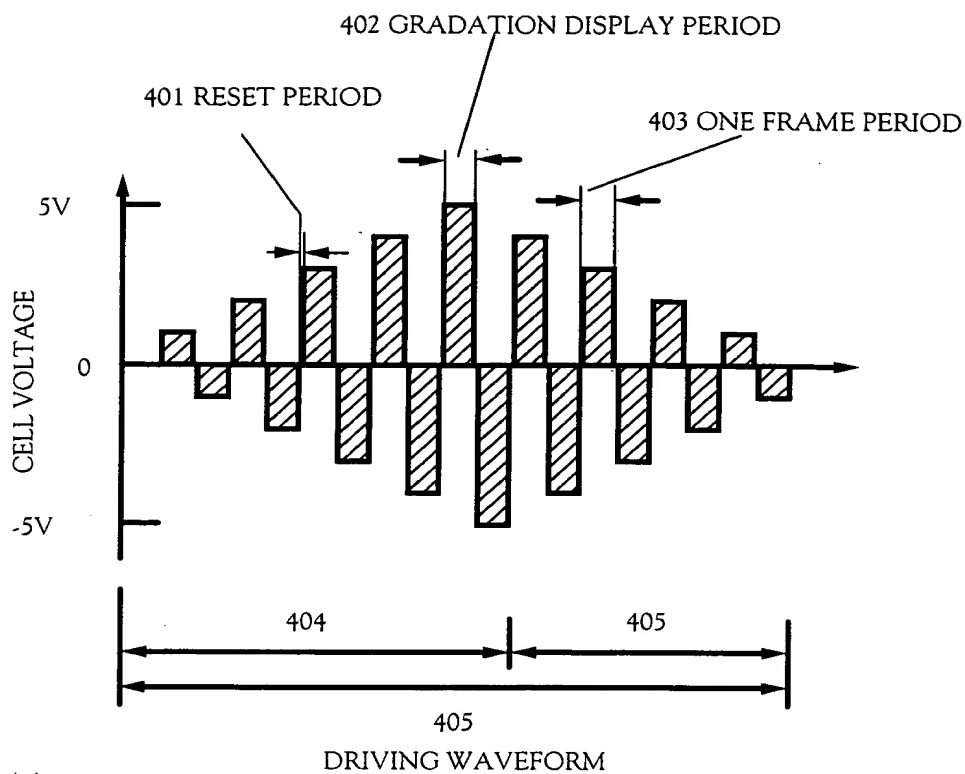


FIG. 4A

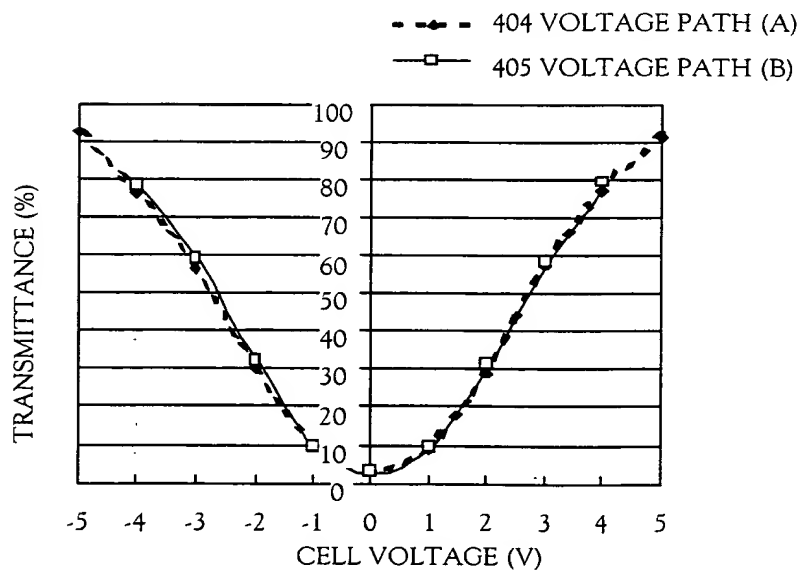


FIG. 4B

DRIVING WAVEFORM AND DRIVING RESULT  
WHEN "0V" RESET PERIOD IS SHORT  
RESET PERIOD: 2msec GRADATION DISPLAY PERIOD: 14.6msec

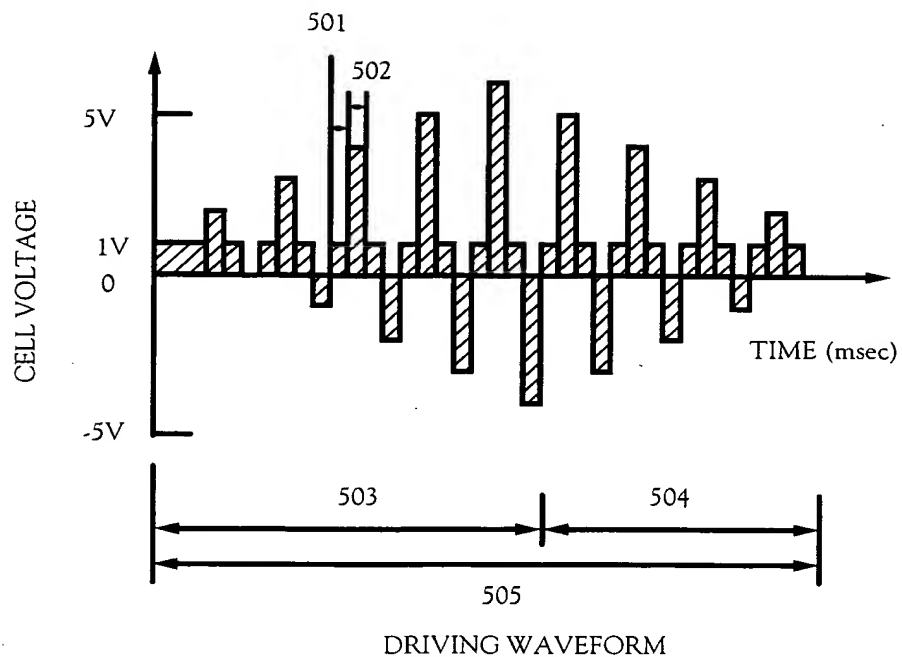


FIG. 5A

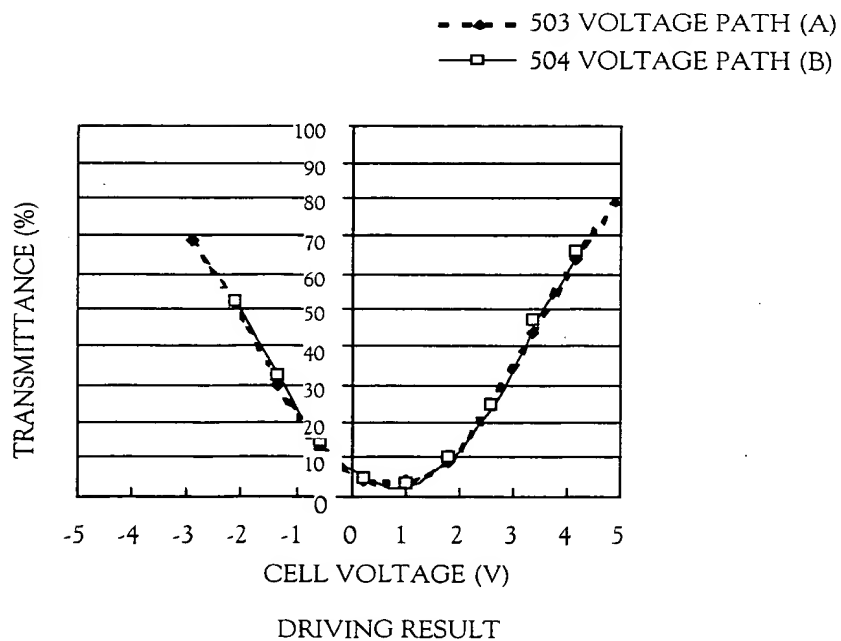


FIG. 5B

DRIVING WAVEFORM AND DRIVING RESULT  
WHEN RESET VOLTAGE OF "1V" IS PROVIDED

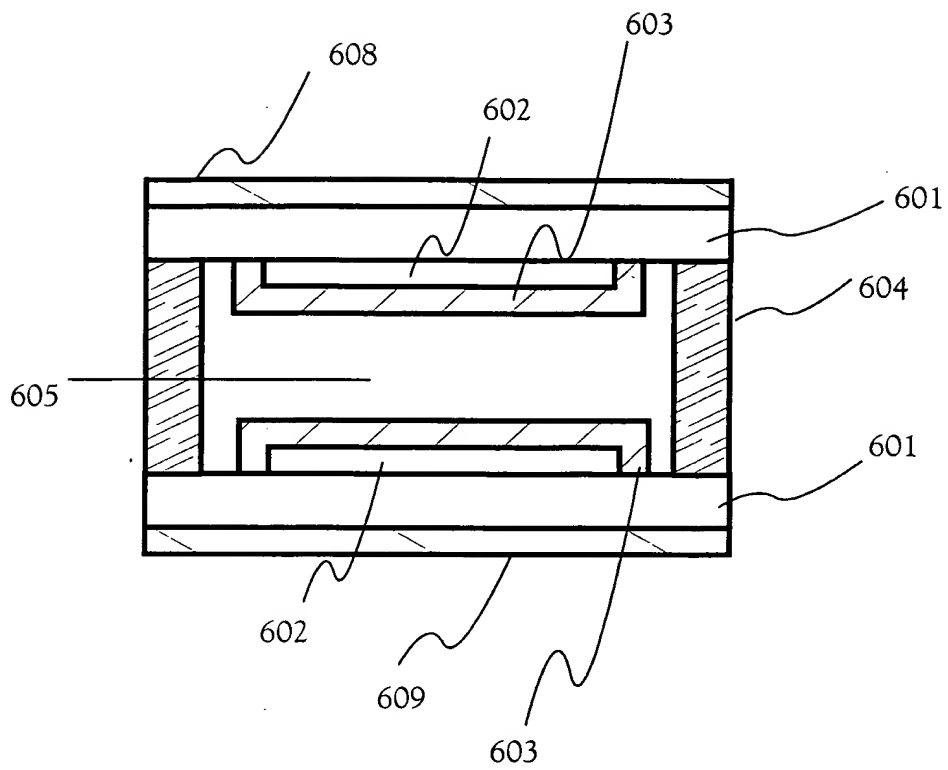


FIG. 6A

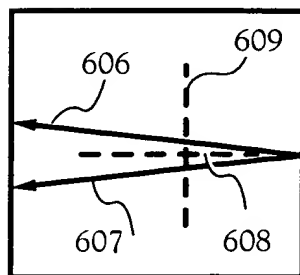


FIG. 6B

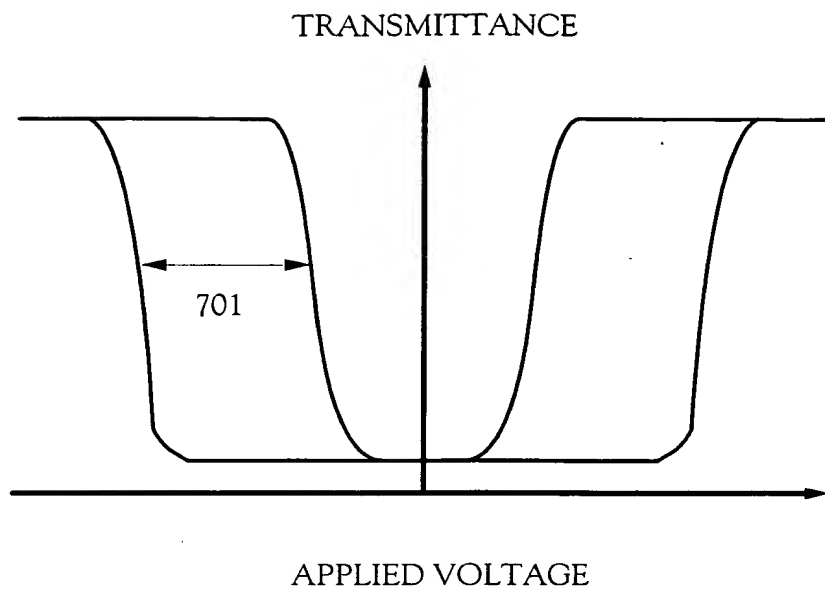


FIG. 7A

PRIOR ART

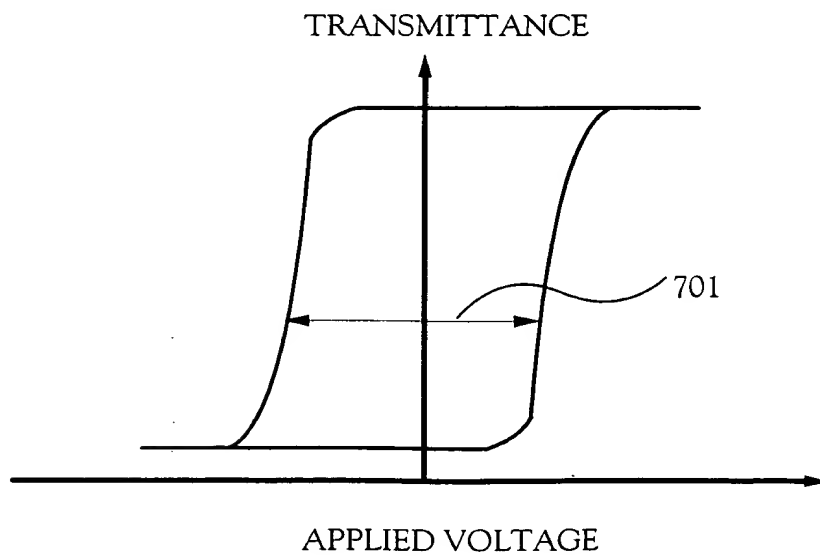


FIG. 7B

PRIOR ART

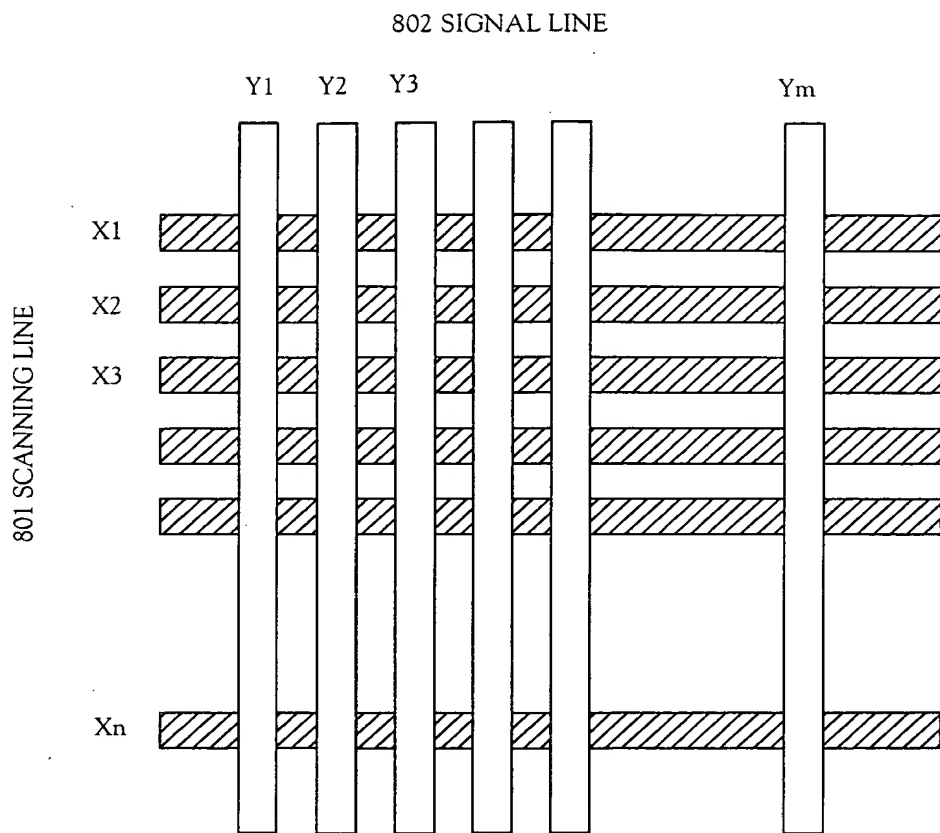


FIG. 8

PRIOR ART



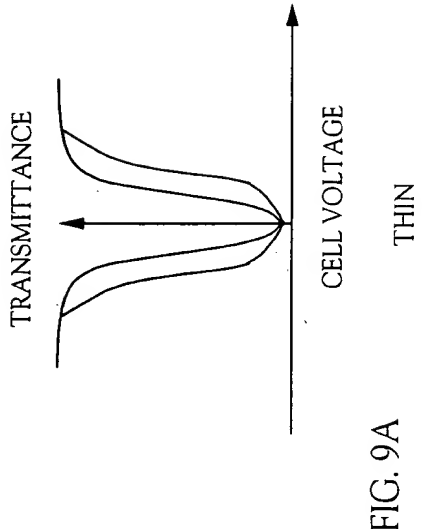


FIG. 9A

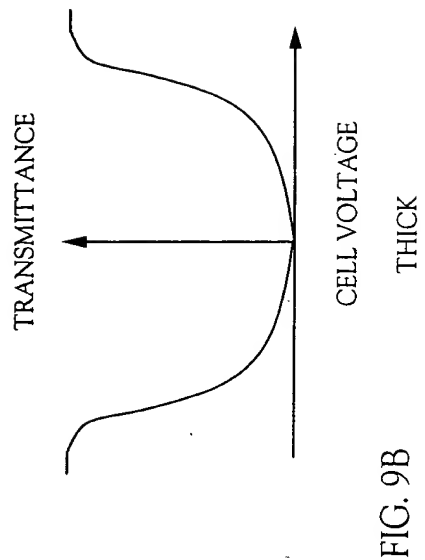


FIG. 9B

ORIENTATION FILM THICKNESS

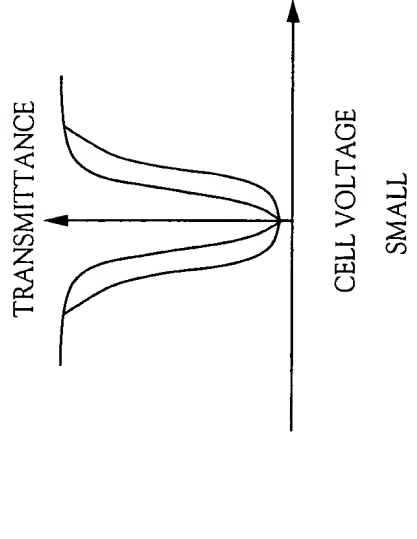


FIG. 9C

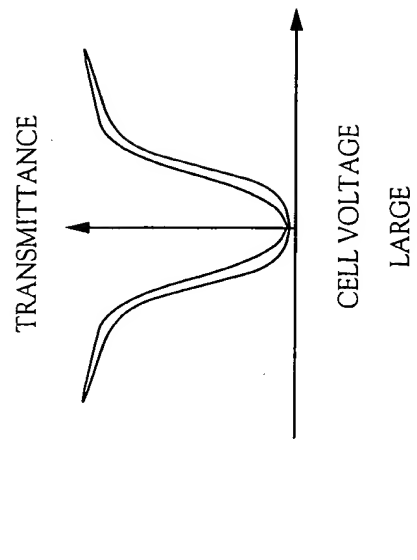


FIG. 9D

SPONTANEOUS POLARIZATION

CHARACTERISTICS OF HYSTERESIS OF THRESHOLDLESS LIQUID CRYSTAL

FIG. 10

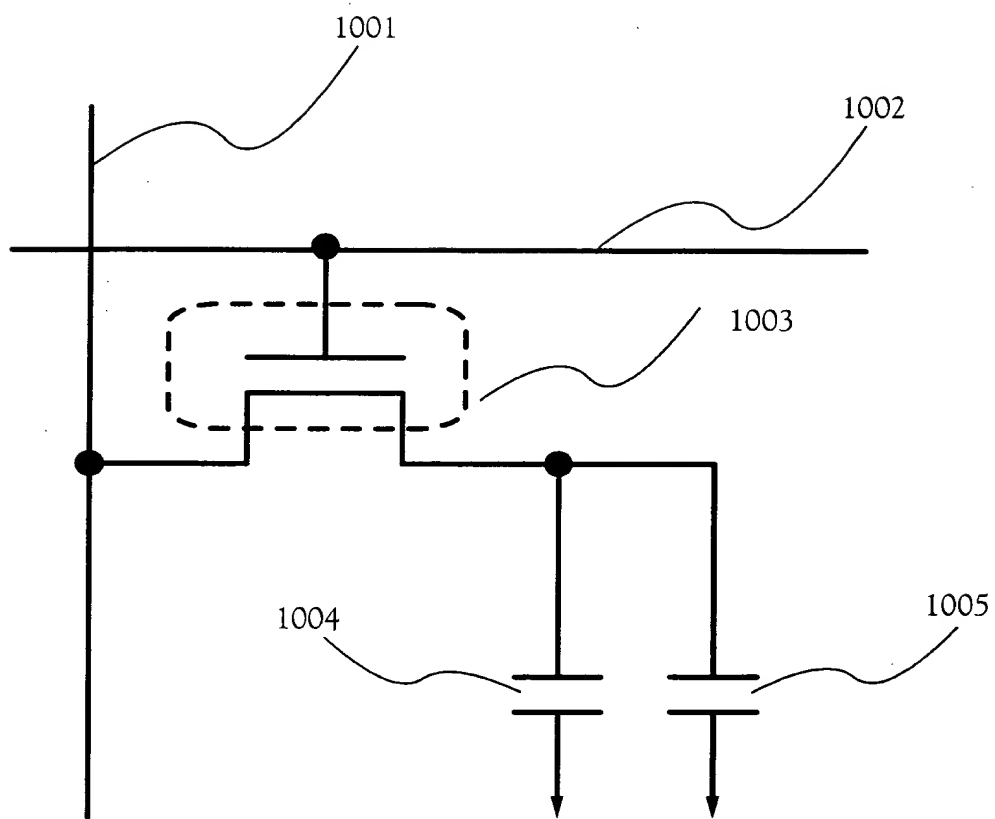


FIG. 10

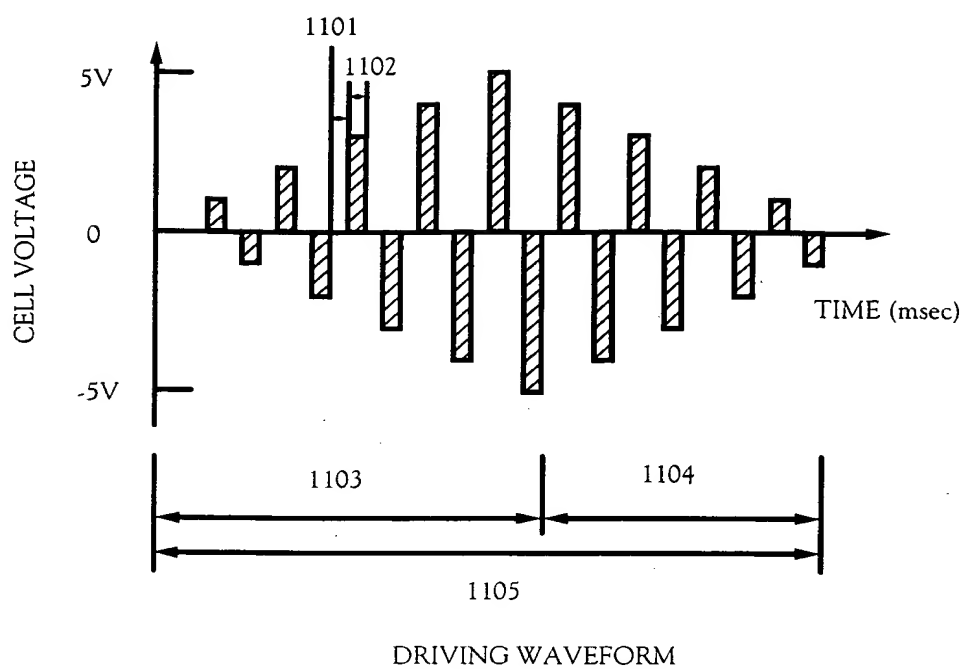


FIG. 11A

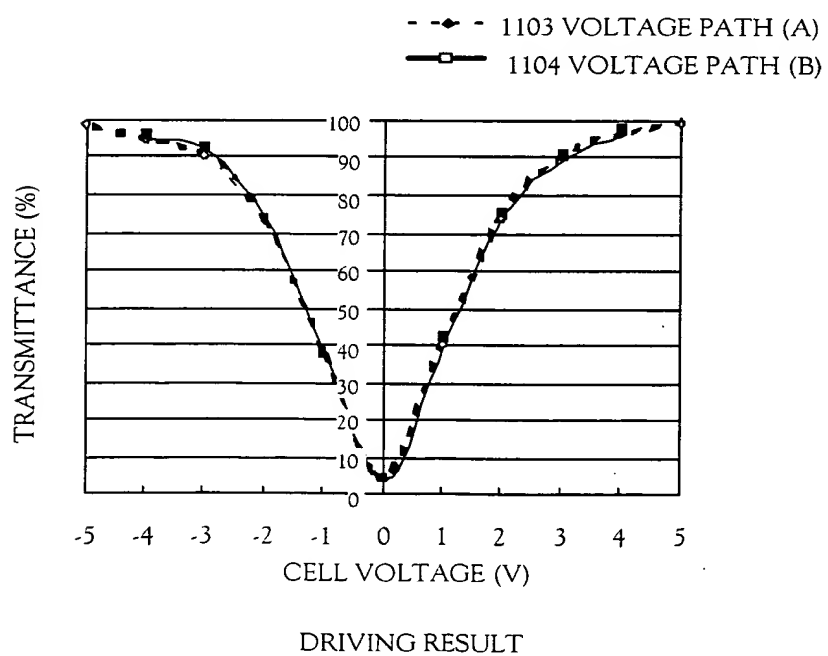


FIG. 11B

DRIVING WAVEFORM AND DRIVING RESULT  
WHEN "0V" RESET PERIOD IS PROVIDED  
SPONTANEOUS POLARIZATION OF LIQUID CRYSTAL: 40 nC/cm<sup>2</sup>

RESPONSE TIME (msec)

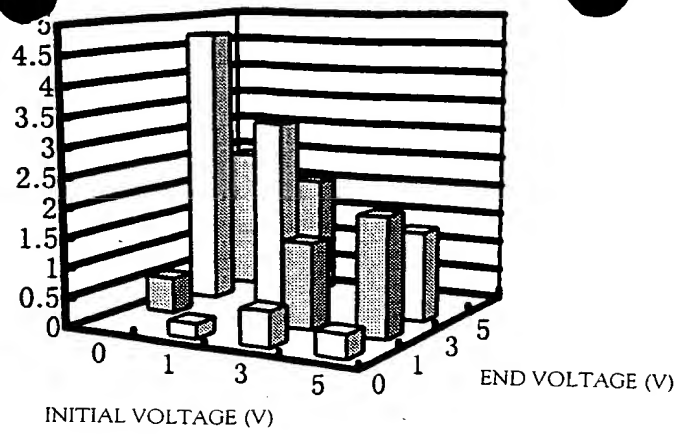


FIG. 12A

RESPONSE TIME BETWEEN  
POSITIVE POLARITY VOLTAGES

RESPONSE TIME (msec)

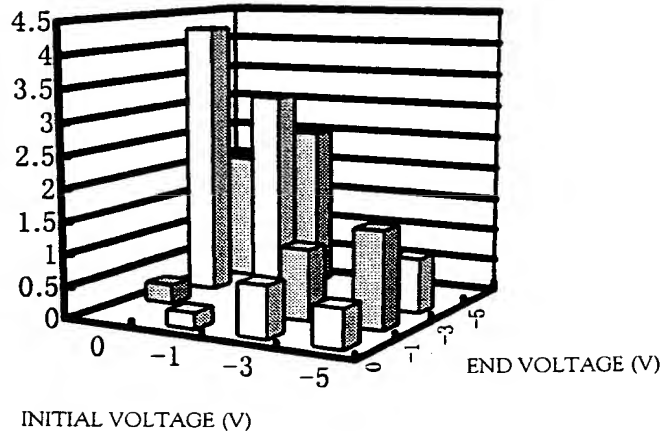


FIG. 12B

RESPONSE TIME BETWEEN  
NEGATIVE POLARITY VOLTAGES

RESPONSE TIME (msec)

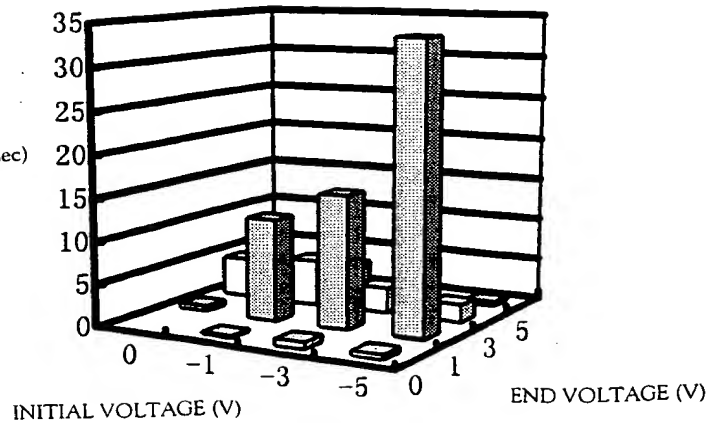


FIG. 12C

RESPONSE TIME BETWEEN  
OPPOSITE POLARITY VOLTAGES

FIG. 13A

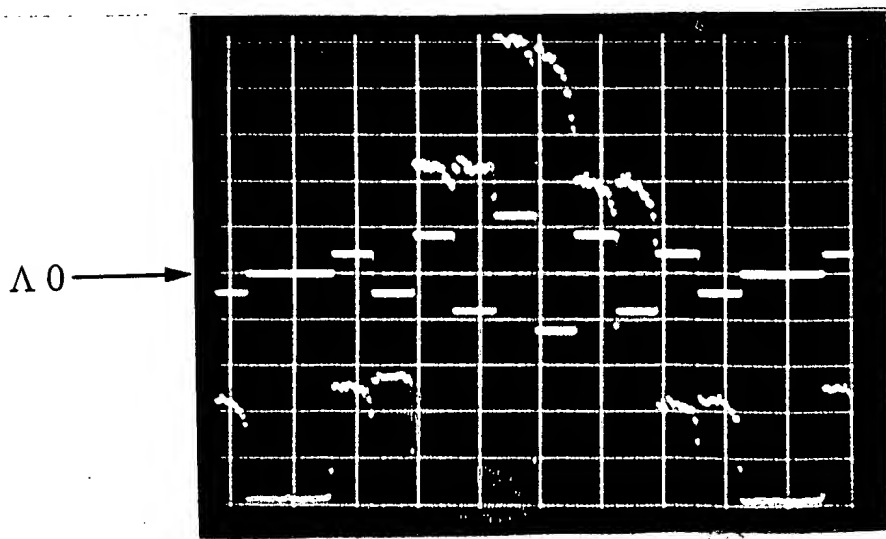


FIG. 13A

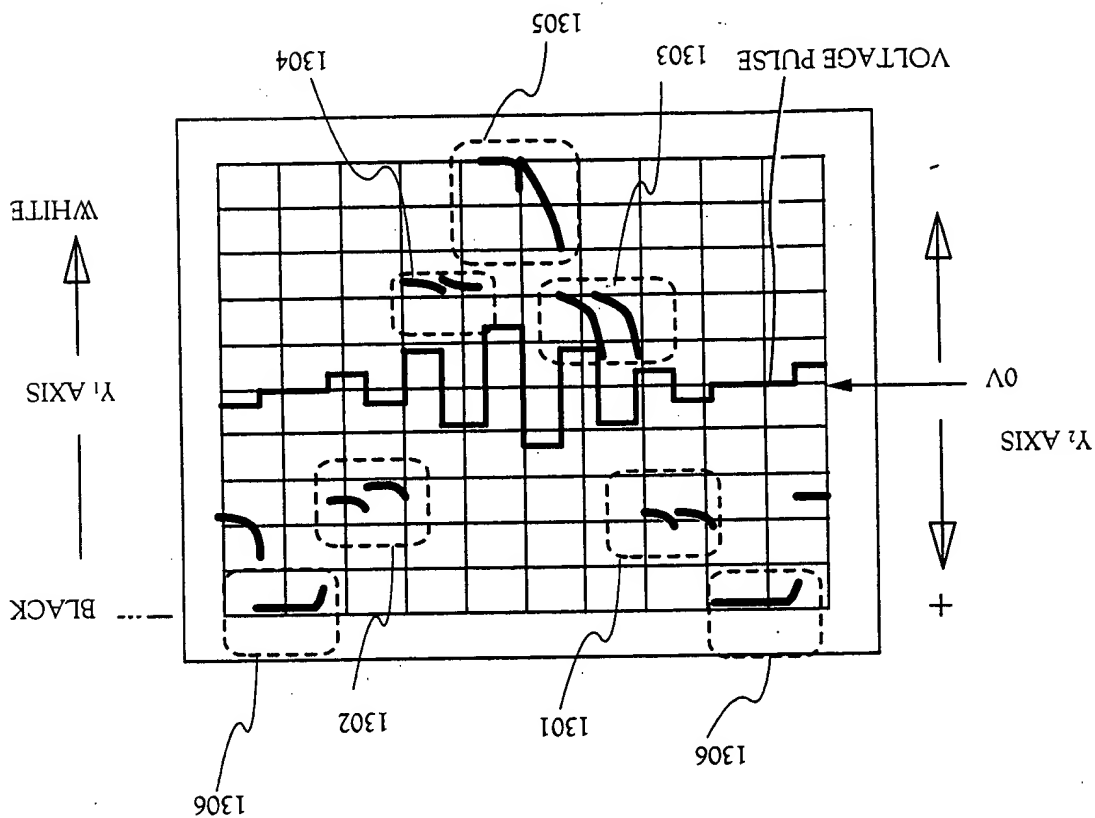


FIG. 13B

OPTICAL RESPONSE OF THRESHOLDLESS LIQUID CRYSTAL  
WHEN "0V" RESET PERIOD IS NOT PROVIDED

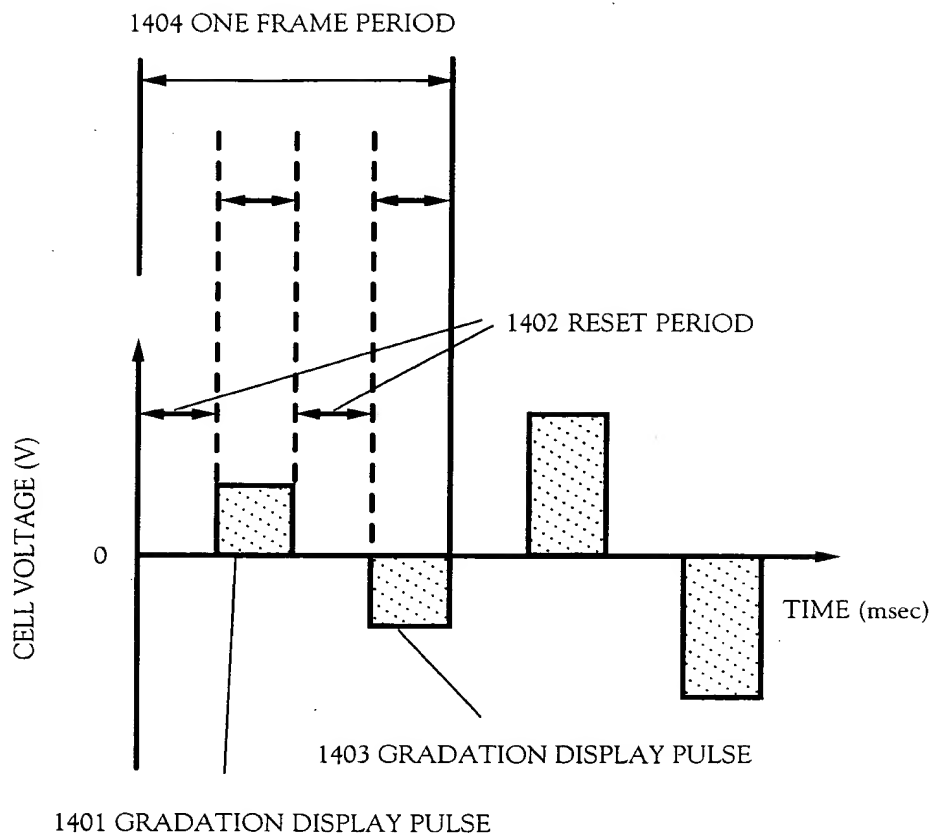


FIG. 14

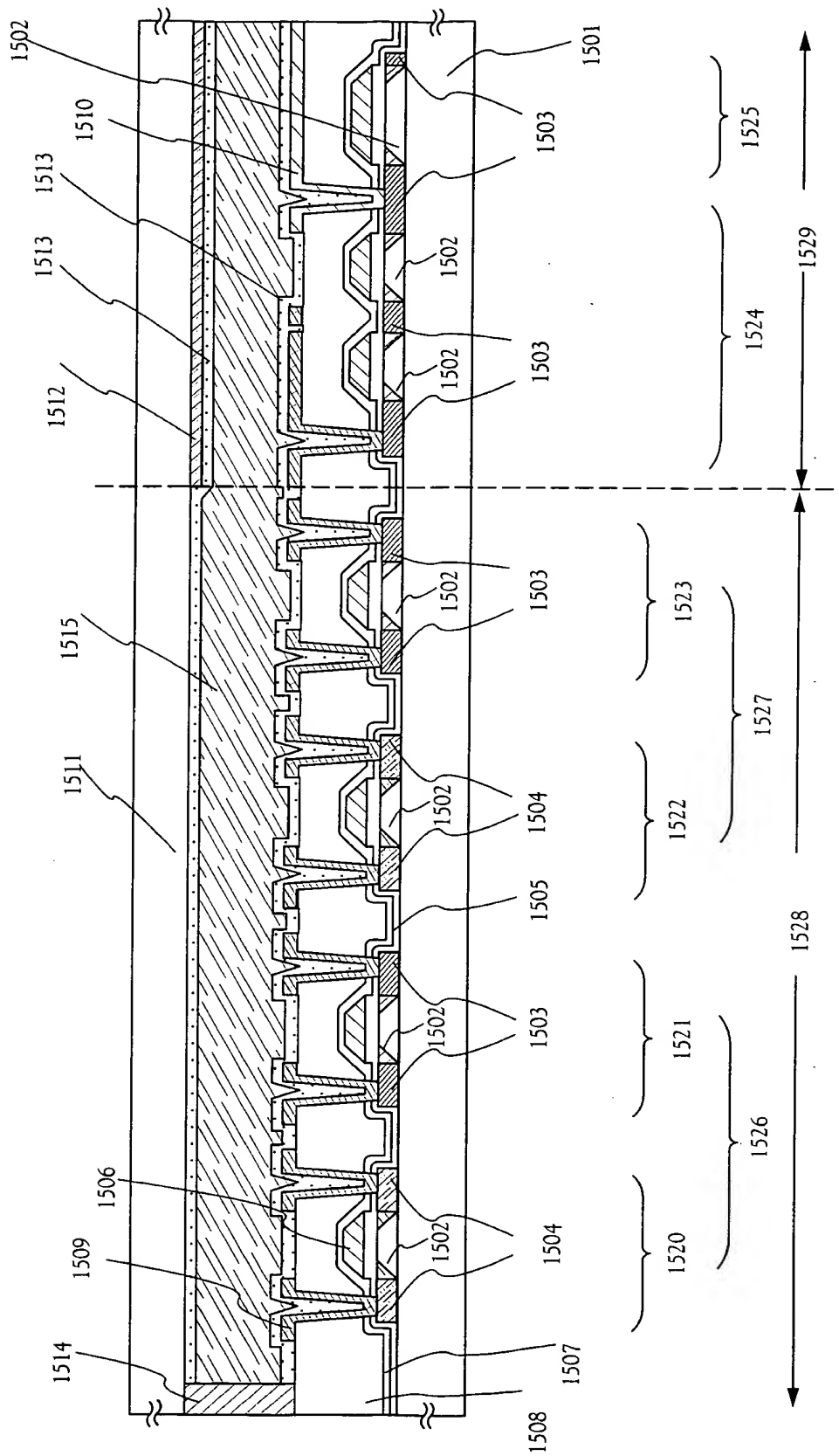


FIG. 15

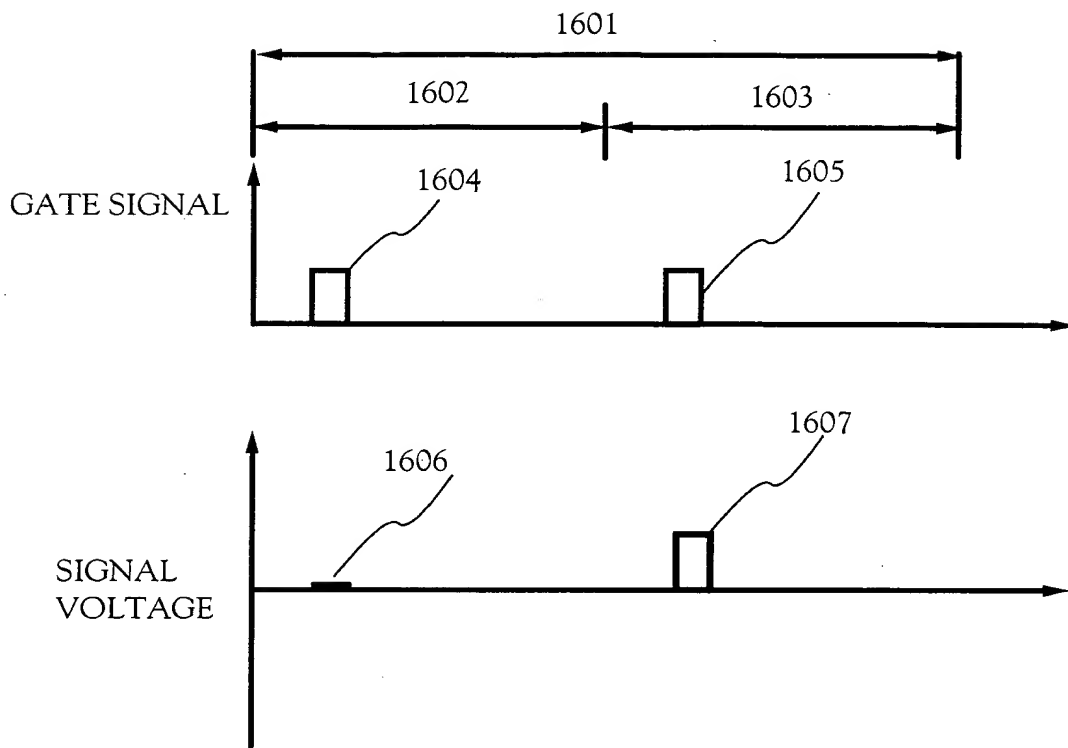


FIG. 16





CH1 Y-SCALE 10.00mV

CH2 X-SCALE 500.0mV

CH1

CH2

FIG. 18D THICKNESS OF ORIENTATION FILM: 220 nm

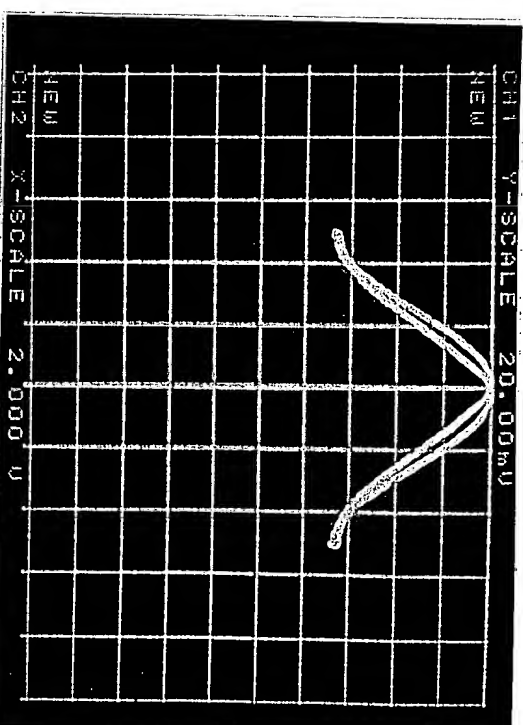
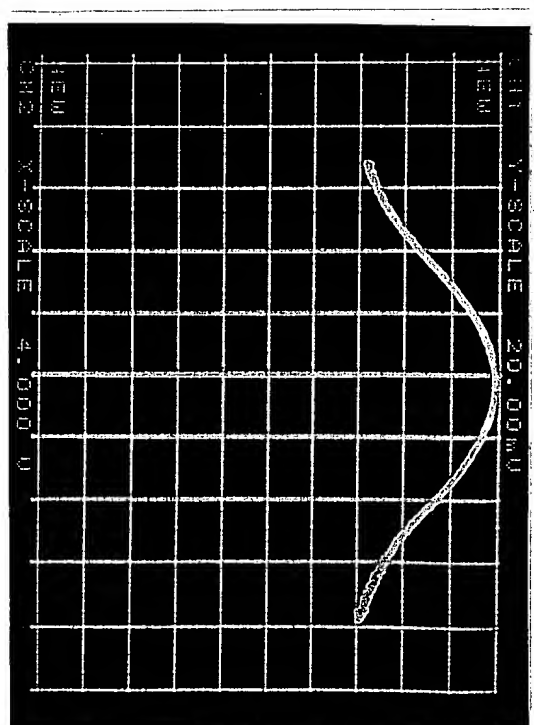
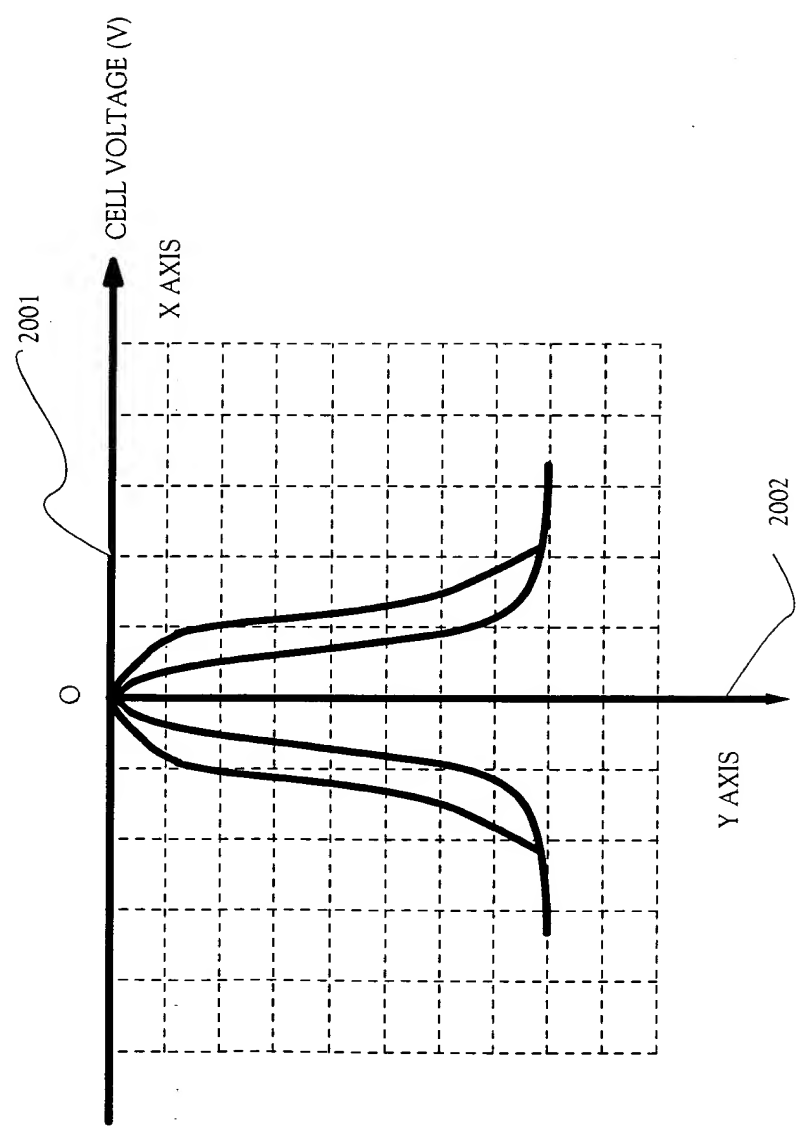


FIG. 19A THICKNESS OF ORIENTATION FILM: 30 nm



CELL VOLTAGE (V)



BRIGHTNESS MEASURED WITH PHOTO MULTIPLIER  
AS LIGHT RECEPTER (mV)

FIG. 20